

Do the Greenland Ice Cores Prove an Old Earth?

Greenland is covered by ice sheets that span more than 700,000 square miles with an average depth of 5,300 feet. The deepest known section is estimated to be around 11,300 feet deep.¹ Since the 1960s, scientists have drilled and extracted cylindrical cores from the ice sheets (called ice cores) from depths of over 10,000 feet. According to some scientists, the age of these ice sheets can be estimated by counting the number of “annual rings” present in the cores. In the GISP2 Ice Core, which was taken from the Greenland ice sheet, scientists have counted 110,000 rings and often cite this as evidence for an old Earth. However, is it really a straightforward process of simply counting the “annual rings”? As we have seen with the fossil record, geologic rock layers, and other remnants from the past, the worldview and assumptions of the scientists analyzing the data play a big role in their conclusions. Let’s take a closer look.

In the upper latitudes, snow accumulates on top of the ice sheet and eventually turns into ice. The weight of the top layer exerts pressure on the layers below and causes them to spread out and become thinner (Figure 1). Consequently, the layers near the bottom of the ice sheet are much thinner than the layers near the top. In fact, some of the bottom layers are believed to be only about one millimeter thick.² Because the bottom layers are so thin, scientists have to use a variety of techniques (i.e. lasers, isotope readings, etc.) to identify them. The rings are definitely real; the key question is: Do they represent annual layers or is there another possible explanation? There are at least two viewpoints:

Secular scientists believe the “present is the key to the past” (uniformitarianism) and assume the Greenland ice sheet required tens of thousands of years to form (based upon the annual precipitation rates seen today and the assumption that the earth is very old). Many of these scientists believe that each ring represents annual seasonal cycles (i.e. winter-summer) and can therefore be counted to determine the age of the ice core sample.

On the other hand, Dr. Jake Herbert and Meteorologist Michael Oard, scientists who believe the Bible is God’s Word, have a much different theory—a grounded theory that is based on the same evidence—but one that starts with a different worldview. They believe that warm ocean temperatures and volcanic activity following the Global Flood actually caused the ice age. When describing the flood the Bible tells us:

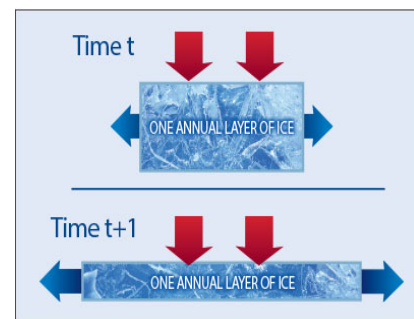


Figure 1: The weight of the top layers of ice exerts pressure on the layers below and causes them to spread out and become thinner³

Fast Facts about The Greenland Ice Cores (continued)

"...on that day all the springs of the great deep burst forth, and the floodgates of the heavens were opened." (Genesis 7:11, NIV)

Many creation scientists believe this passage refers to tremendous earthquakes, tsunamis and volcanic eruptions and flooding occurring on a global scale. This theory is well supported by fossil evidence and massive geologic layers deposited by water all over the world. Michael Oard believes a cataclysmic event such as this would cause the ocean temperatures to rise considerably and fill the skies with massive amounts of volcanic ash (in the form of aerosols)—ideal conditions to start an ice age! The warmer oceans would generate tremendous amounts of precipitation and the aerosols formed by the volcanoes would cause the summers to be much cooler until the ice age was well underway. Oard believes the ice sheets formed rapidly during the ice age which lasted around 700 years.⁴

If Oard's post-flood theory is correct, then many of the compressed rings near the bottom of the ice sheets may not actually be *annual* rings, but rather were formed during the frequent and powerful snow storms that occurred after the flood. Oard's post flood ice age theory provides a possible cause for the ice age, something that has baffled secular scientists for years (there are dozens of secular ideas and theories about the ice age).

Remember that a key part of historical science is interpreting data and developing theories about the past—a process which is often influenced by the worldview of the scientists performing the work. Whenever we encounter scientific theories or alleged evidence that appears to contradict the Bible, we should always dig deeper and ask a lot of questions. Interpreting the ice core rings is a very complicated matter and developing a better understanding will require readers to conduct more research. We highly encourage you to check out the recommended resources listed below.

Recommended Resources

- [Are the Greenland and the Antarctic Ice Sheets old?](http://creation.com/ice-sheet-age) Michael J. Oard. Available: <http://creation.com/ice-sheet-age>
- Ice Cores, Seafloor Sediments, and the Age of the Earth, Part 1, Jake Hebert, Ph.D., Available <http://www.icr.org/article/8130/>
- Ice Cores, Seafloor Sediments, and the Age of the Earth, Part 2, Jake Hebert, Ph.D., Available: <http://www.icr.org/article/8181/>
- [Frozen in Time, Woolly Mammoths, The Ice Age, and The Biblical Key to Their Secrets](http://www.creation.com), Michael J. Oard. Available: www.creation.com
- Video: That's a Fact: The Ice Age. Available: <http://www.icr.org/thatsafact/>

References

¹ Oard, Michael J. Are the Greenland and the Antarctic Ice Sheets old? Available: <http://creation.com/ice-sheet-age>

² Hebert, Jake. Ice Cores, Seafloor Sediments, and the Age of the Earth, Part 2. Available <http://www.icr.org/article/8181/>

³ Hebert, Jake. Ice Cores, Seafloor Sediments, and the Age of the Earth, Part 1. Available <http://www.icr.org/article/8130/>

⁴ Oard, Michael J. Are the Greenland and the Antarctic Ice Sheets old? Available: <http://creation.com/ice-sheet-age>